

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

FIG. 1

```
PRIMITIVE SIMPLE _ DFF ( Q, D, CLK, SET );
```

```
  OUTPUT Q;
```

```
  INPUT  D , CLK, SET;
```

```
  REG    Q;
```

```
  // POSITIVE EDGE TRIGGERED D FLIP-FLOP WITH ACTIVE HIGH
```

```
  // ASYNCHRONOUS SET
```

```
  TABLE
```

```
  //  D      CLK  SET      Q      Q+
```

```
    1      ( 01 )  0  :  ?  :  1;  // LINE 1 : CLOCKED DATA
```

```
    0      ( 01 )  0  :  ?  :  0;  // LINE 2 : CLOCKED DATA
```

```
    ?      ?      *  :  ?  :  1;  // LINE 3 : IGNORE : PESSIMISM
```

```
    ?      ?      1  :  ?  :  1;  // LINE 4 : ASYNCHRONOUS SET
```

```
    ?      ( ? 0 )  ?  :  ?  :  -;  // LINE 5 : IGNORE FALLING CLOCK
```

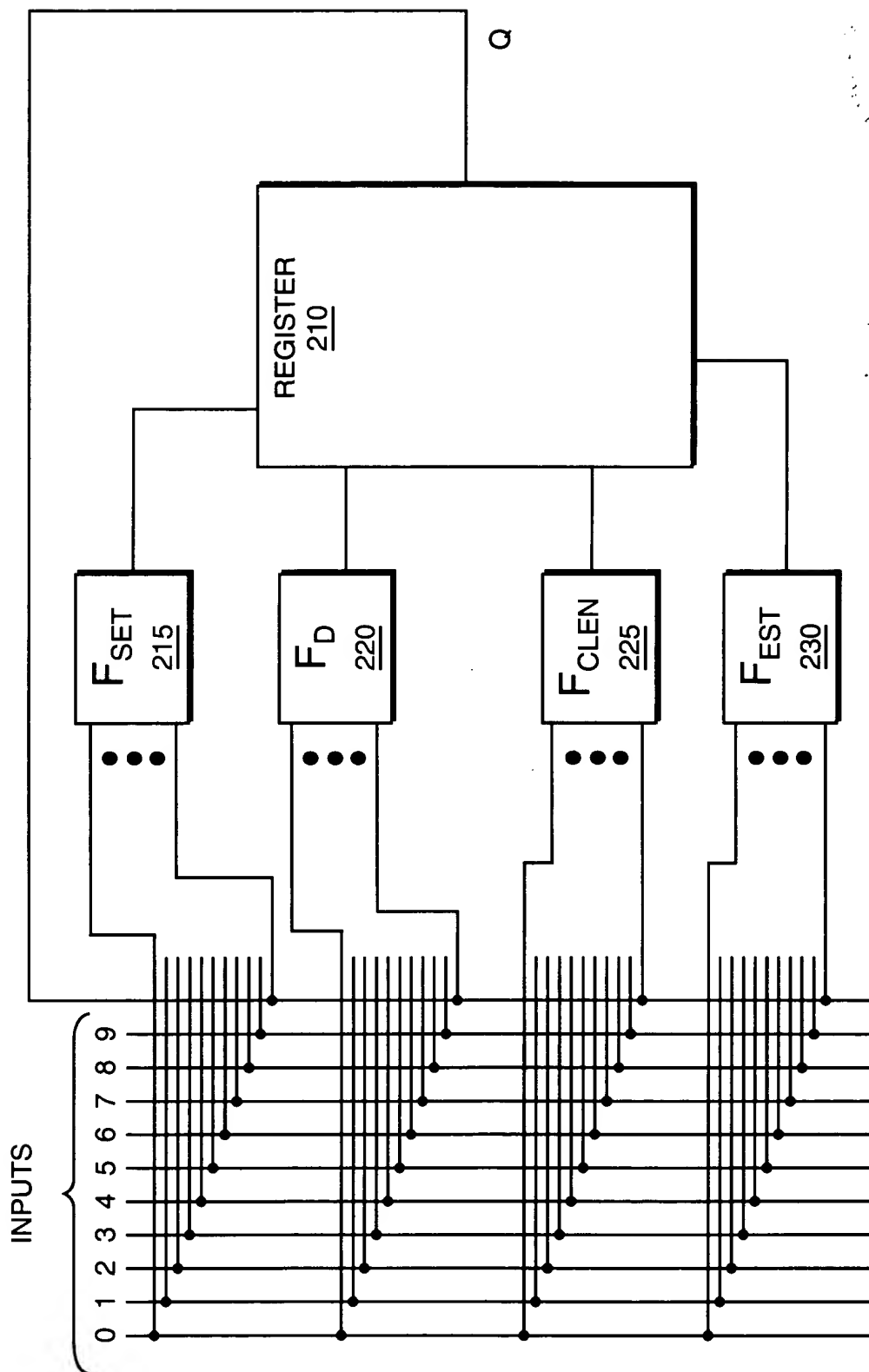
```
    *      1      ?  :  ?  :  -;  // LINE 6 : IGNORE DATA EDGES
```

```
    *      0      ?  :  ?  :  -;  // LINE 7 : IGNORE DATA EDGES
```

```
  ENDTABLE
```

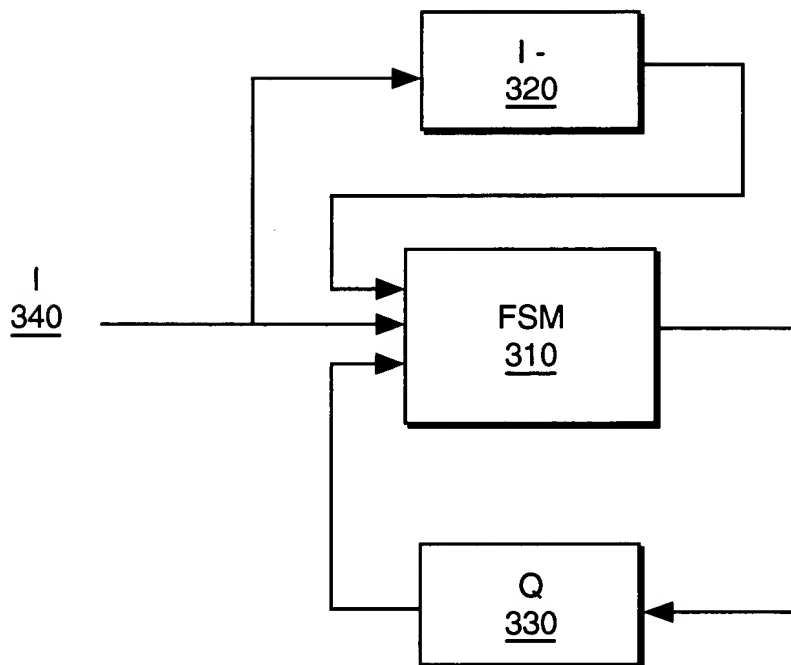
```
ENDPRIMITIVE
```

FIG. 2



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FIG. 3



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FIG. 4

		Q+=0	Q+=1	Q+=X	
	I	0 1 X	X 0 1 X	X 0 1 X	X
	I-	0 0 0	X 0 0 0	X 0 0 0	X
		0 0 0	X 0 0 0	X 0 0 0	X
		
Q=0	0 0 0				
	0 0 1				
	0 0 X				
	...				
	X X X	A	B		I
	0 0 0				
Q=1	0 0 1	C	D		
	0 0 X				
	...				
	X X X				H
	0 0 0	E	F		G
	0 0 1				
Q=X	0 0 X				
	...				
	X X X				

[illegible]

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FIG. 7

	I, Q +	0 0 0 1	0 0 1 1	0 1 0 1	0 1 1 1	1 0 0 1	1 0 1 1	1 1 0 1	1 1 1 1
I-,Q									
0001	R		L			E			
0011	R	E			L		L		
0101	R	E			L			E	
0111	R		L	E					L
1001	R	E					L	E	
1011	R		L			E			L
1101	R			E		E			L
1111	R				L		L	E	

FIG. 8

D, CLK

SET, Q

	00	11	11	10
00	0	0	0	0
01	DC	0	DC	DC
11	DC	DC	DC	DC
10	1	1	1	1

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FIG. 9

		D	
		0	1
SET, Q	00	0	1
	01	0	1
	11	DC	1
	10	DC	DC

FIG. 10

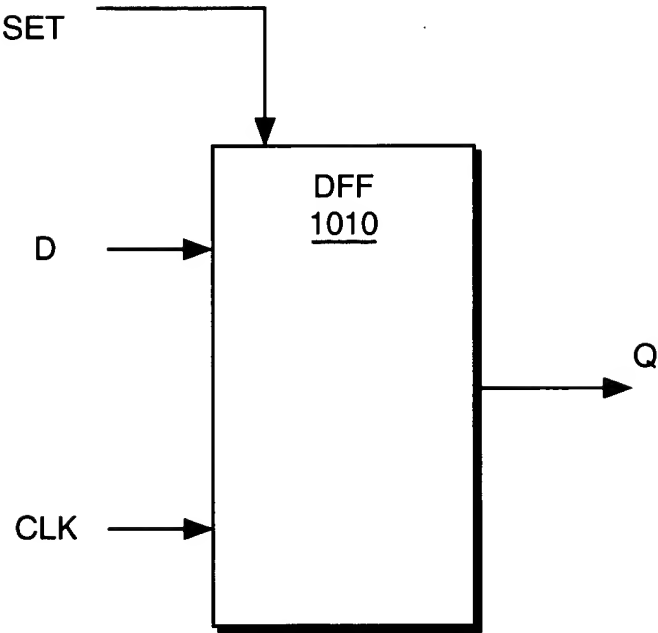
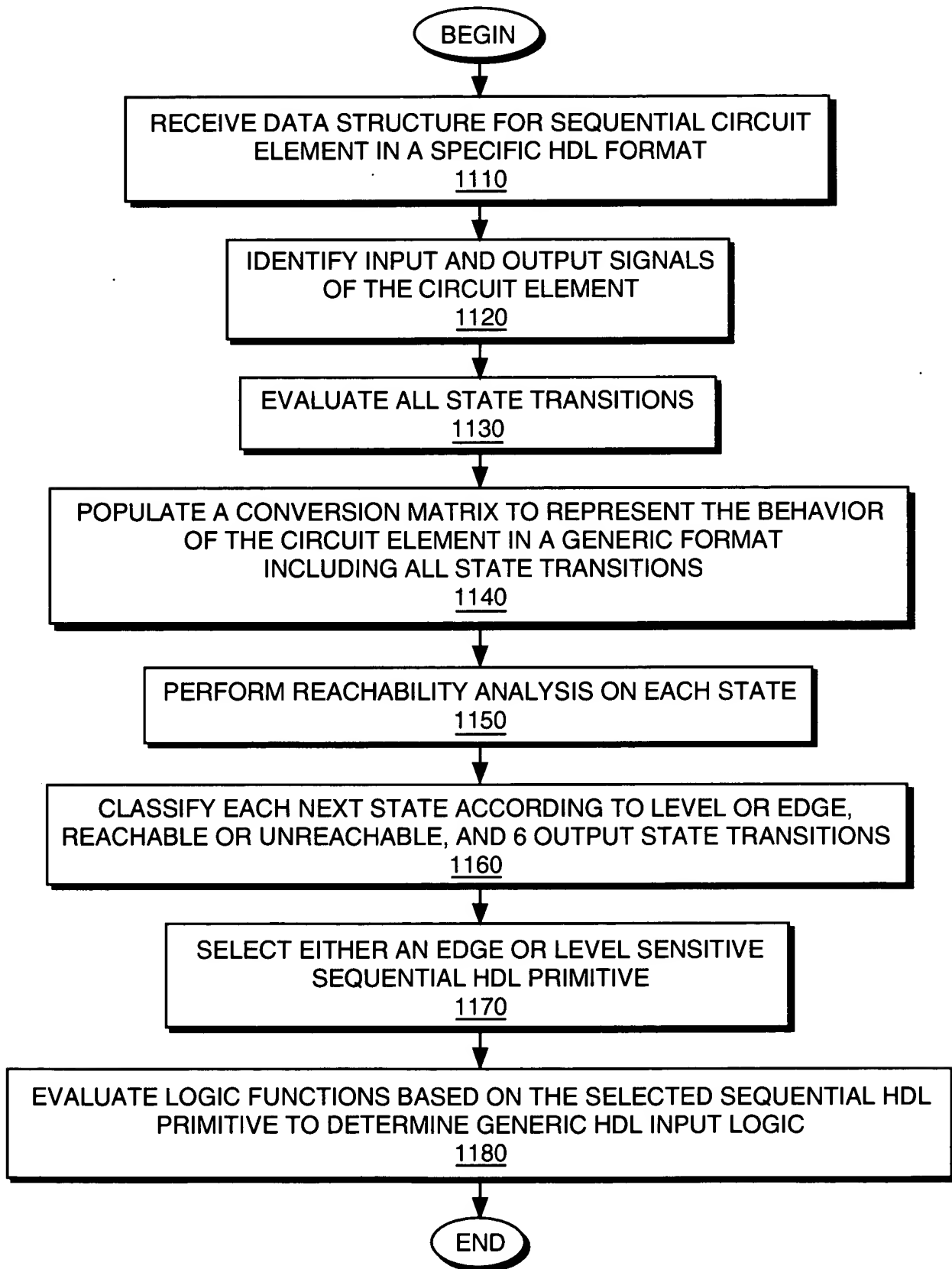
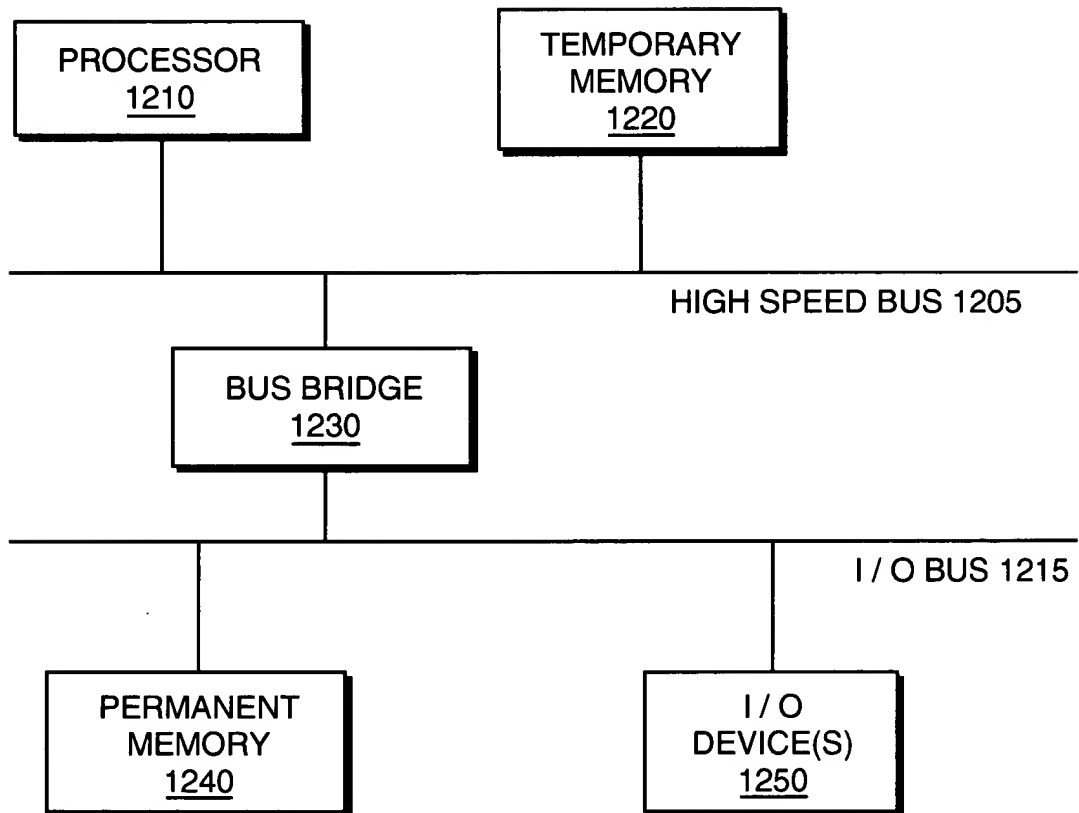


FIG. 11



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FIG. 12



APPROVED	O.G. FIG.	
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FIG. 13

